

Creating Value through Integrative Supply and Demand Management

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Creating Value

Depends on :

The effectiveness of the industry to make decisions generating value added through efficient coordination among the supply chain agents to give what customers want, when they want it, and at the least cost

Traditional Ways of Creating 'Value' Focus on

Developing **Competitive** Advantage **by**

- Lowering costs
- Charging higher prices
- Developing niche products
- Expanding markets

Those tasks are Necessary, but
not Sufficient for Comprehensive
Discovery of How to Create Value

A comprehensive
framework is required


For agricultural industry, the framework should

- Capitalize on the public R4D for value discovery and decision making
- Evaluate the potential sources of value generation by distinguishing between operations, tactical and strategic decisions
- Use lateral and vertical collaboration within industry sectors comprised of many small farmers to evaluate and create value-added

A Conceptual Framework: Supply Demand Integrated Management Framework (SDIM)

- Emphasizes **Integration** between Supply Decisions and Demand Information
- Evaluate **Value Creation** using Supply Chain Framework
- Capitalize on the role of **R4D** provided by land grant university
- Elevate the importance of **Strategic and Tactical activities for longer term sustainability**

Figure 1. Agricultural Supply Demand Integrative Management (SDIM) Framework



Supply and Demand Integration	Research For Development (R4D) Activities	Decision Making Components	Specific Activities Under The Three Decision Making Components	Advantages Of Adopting This Framework
<p style="text-align: center;">SUPPLY</p>  <p style="text-align: center;">DEMAND</p>	Acquiring Knowledge of the Market	Strategic	<ul style="list-style-type: none"> -Forming Alliances such as Cooperative -Deciding on Cooperative Size -Setting Prices for Produce 	<ul style="list-style-type: none"> -Increases competitive advantage
	Understanding Industry Profile	Tactical	<ul style="list-style-type: none"> -Selecting Varieties for Production -Deciding Quantity/Acres to Produce -Selecting the Market Segment (eg. chefs) -Deciding on Branding or other value-added strategies 	<ul style="list-style-type: none"> -Enhances outputs -Helps in import substitution -Increases profitability
	Exploring Buyer Preferences (e.g. chefs)	Operational	<p>Production</p> <ul style="list-style-type: none"> -Deciding on Planting Activities -Deciding on Post Harvest activities <p>Logistics</p> <ul style="list-style-type: none"> -Making Financial Management Decisions -Deciding on Brand Design -Deciding on Packaging -Arranging for Distribution and Mode of Transportation 	<ul style="list-style-type: none"> -Increases consumer satisfaction -Improves quality -Improves response time to market signals
Gathering Demand Information				
Financial Analysis				

SDIM Framework highlights

Integrate Supply and Demand

1. Use the demand/market information and integrate it with supply decisions (both strategic and tactical) at the onset of production decisions



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R4D in Land grant Institution to support key decisions

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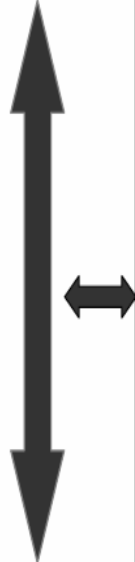
- The R4D is essential for generating information and technologies for quality products, market and buyer preferences and timing decisions
- The R4D is key to drive the industry decisions of strategic, tactical and operational nature

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3 key decision components for

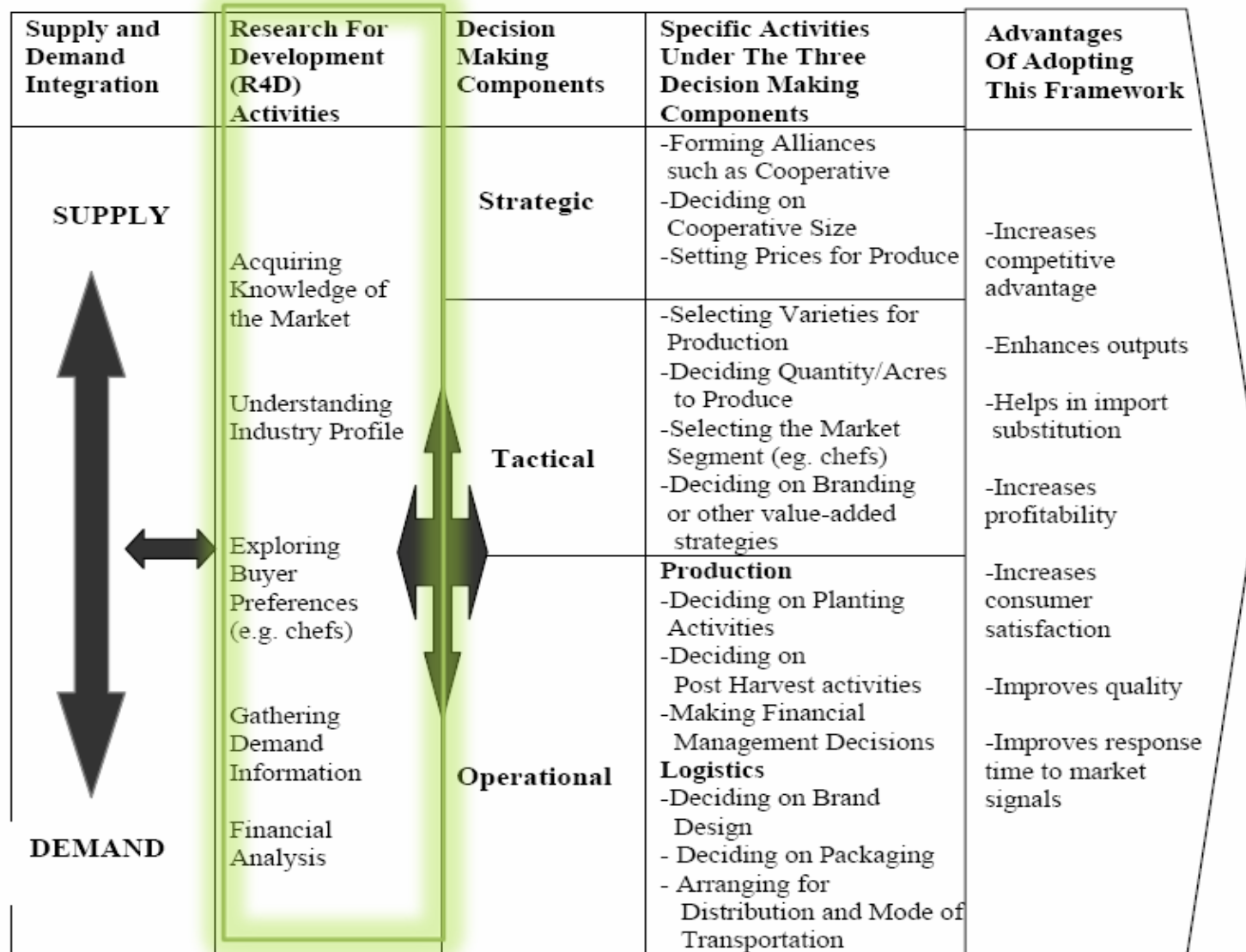
competitiveness and value creation

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- **Strategic** – degree of lateral and vertical alliances, size of cooperative
- **Tactical** – what varieties to grow, who to sell to i.e. niche markets, branding or no branding
- **Operational** – production decisions, logistic decisions, financial management

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Advantages of adopting the SDIM Framework

- Increases competitive advantage
 - Increase outputs
 - Increase import substitution
 - Improve quality
 - Decrease response time to market signals
- Creates value
 - Increase profitability
 - Increase consumer satisfaction
 - Increase societal welfare

7 Steps on How to Create Value via SDIM

1. Identify End Markets
2. Evaluate Working Environment
3. Draw Value Chain Map
4. Assess Inter-firm Cooperation
5. Evaluate Supporting Markets
6. Develop a Competitiveness, Value-Added Strategy
7. Develop an Action Plan

An Empirical Example : Hawaii Avocado Industry

Step 1. End Markets

- Hawaii Markets - 2.8 million pounds
 - Imports 2 million lbs of avocados
 - Local production ~ 800,000 lbs
- Markets
 - Chef's Market (Restaurants)
 - Higher end
 - Other Markets
 - Wholesale
 - Grocery Stores
 - Farmer's Markets – Direct Consumer Sales

Step 2. Evaluate Working Environment

- Over 30 -200 local varieties
- Can supply year-round and different varieties for different uses – An advantage over imported Hass
- Hawaii avocado association
 - Venue to Discuss challenges and opportunities
 - Venue to Work closely with each other informally to discuss tactical and strategic moves
- Tropical fruits growers association
 - Seek funding for research, marketing and promotion
 - Lobby for fair trade policies and legislation

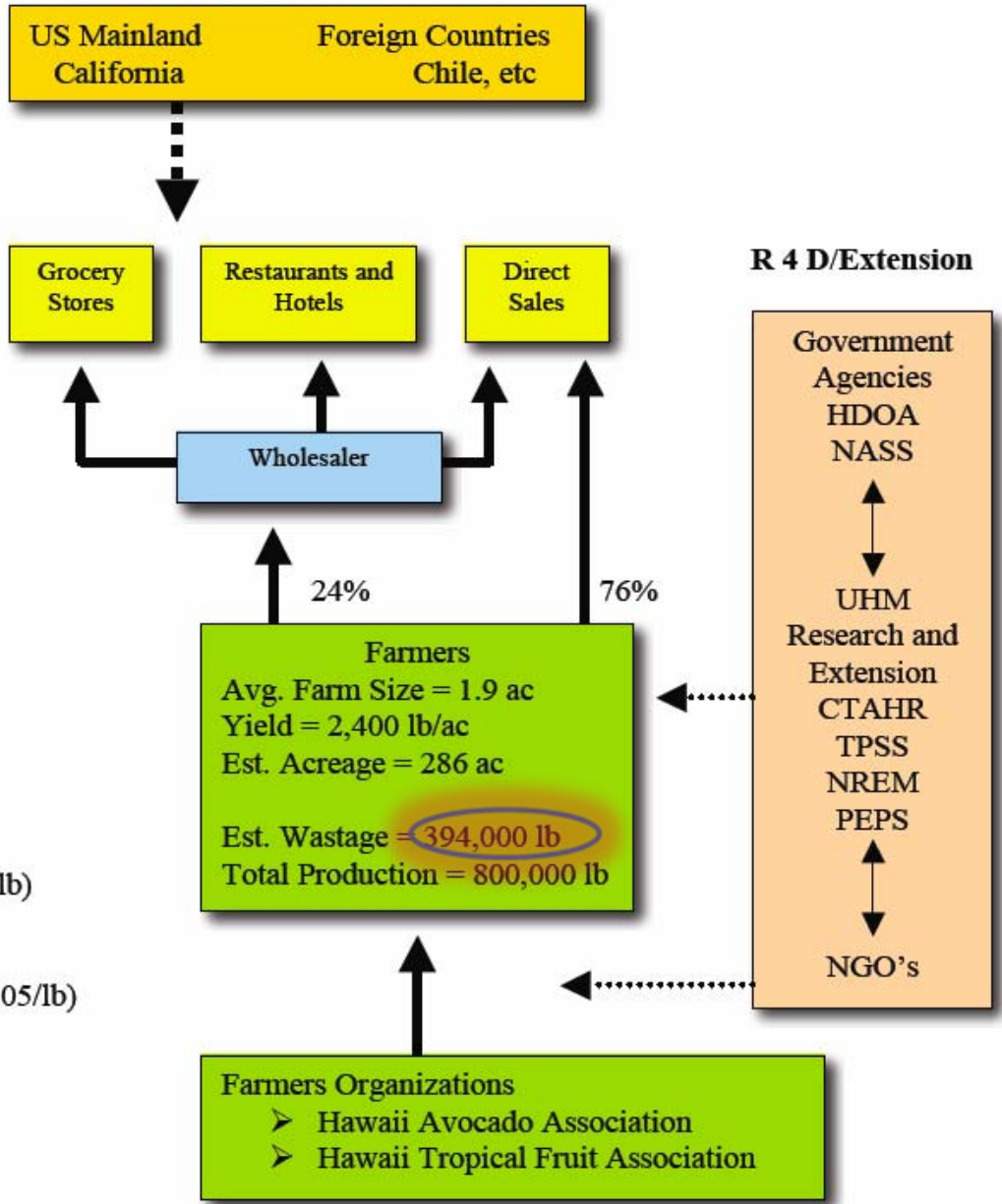
Step 3: Avocado Value Chain Map

● **Imports**
 ~\$8,520,000
 (2,130,000 lbs x \$4.00/lb)

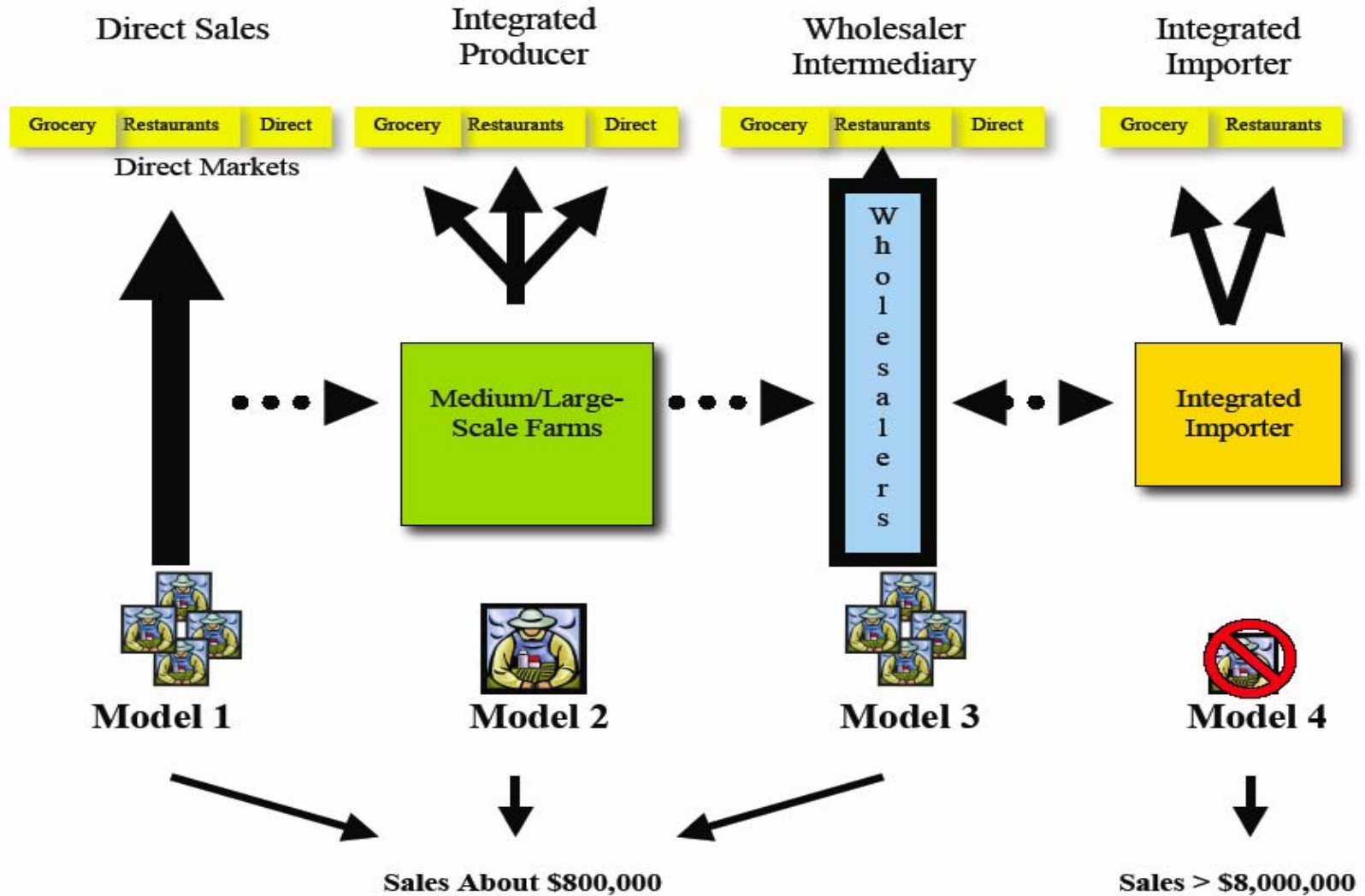
● **Domestic Market**
 > \$9,000,000

● **Wholesale Market**
 ~192,000lb x margin?

● **Farm Sales**
 Wholesale: (~192,000lb x \$.86/lb)
 ~ \$165,120
 +
 Direct Sales: (~608,000 lb x \$1.05/lb)
 ~ \$638,400
 =
 Total Farm Sales: ~ \$803,520



Step 4: Assess Inter-firm Cooperation Organization of Avocado Market Supply: 4 Models



Step 5. Evaluate Supporting Entities

- R4D can be carried out by land grant universities
- Avocado market research funds ~ \$35,000/yr
- Key value chain constraints and opportunities include:
 - Lack of technical support
 - Production vs market-led orientation
 - Lack of marketing promotion
 - Lack of awareness for locally grown avocados
 - Lack of awareness of taste difference

Step 6. Develop a Competitiveness, Value-Added Strategy

Value-added Goal: Import Substitution
through R4D how to provide:

1. Consistent, year round supply of locally grown avocados – better coordination
2. Supply superior varieties over imports – selection of varieties
3. Understand buyer purchasing decisions

Step 7. Develop an Action Plan for Strategic and Tactical Decisions

Conduct R4 D on:

1. Willingness to form a marketing cooperatives?
2. Will the coop make more money than selling individually?
3. Ask buyers to compare local varieties with imports through taste testing
4. What does buyers look for when purchasing avocados?
5. Willingness to Brand local products??

Progress on Action Plan

1. 69% of farmers willing to form a coop
2. Optimal size of coop that makes more money than selling individually : 103 –125
3. Chefs significantly prefer local varieties over imported Hass
4. Consumer value the following according to importance: Price -, Taste, Size +, Origin (Local) and Ripeness (3 day)
5. Consumers are willing to pay \$.47/lb more for locally grown products all else being equal.

Posted on: Wednesday, December 19, 2007

TASTE

Local avocados get more respect

By [Wanda A. Adams](#)

Advertiser Food Editor

Now a University of Hawai'i research project aims to help local avocado farmers tap the increasing hunger of Islanders for avocados (we eat more than 2 million pounds year) and for locally grown products.

At a blind tasting last week for local chefs at Kevin Hanney's 12th Ave Grill, chefs first tasted, then learned the names of, fall-winter local avocados: particularly Kahalu'u (the hands-down favorite), Linda and Malama.



The Next Steps

- Switch to varieties with the largest commercial potential;
- Educate consumers, the food industry and restaurants about local avocados, to create awareness, a demand and a niche;
- Label local avocados by name, and providing opportunities to see and taste them, as well as other marketing strategies;
- Establish an avocado cooperative to assist with marketing and distribution.

"As fruit growers, we're way behind what (specialty vegetable) farmers have," said Love, speaking of production, distribution and marketing structures.

Conclusions for Value Creation

1. Take advantage of the public good of R4D for any agricultural industry
2. Make your supply decisions with ample demand information
3. Think beyond firm operational decisions to include industry strategic and tactical decisions
4. Follow the 7 Steps for Comprehensive Value Creation

Acknowledgments

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